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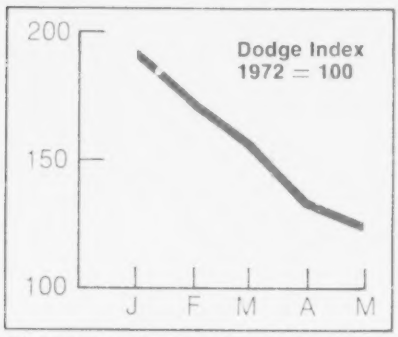
1981 Dodge/Sweet's Construction Outlook

Quickie Recession/Wobbly Recovery

This has been one of those years when too much of what has happened in construction markets can be explained by what has happened in credit markets.

Three distinct periods are easily identified.

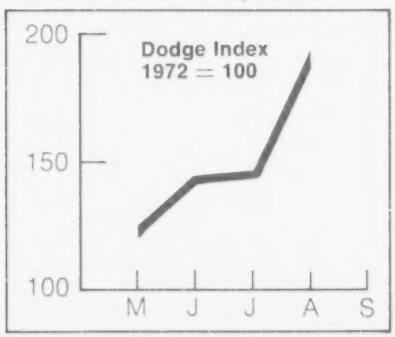
Period 1: February through May



After more than a year of frustration in trying to break inflation's grip, the Fed went all out, boosting its discount rate to an all-time high and following up with credit controls.

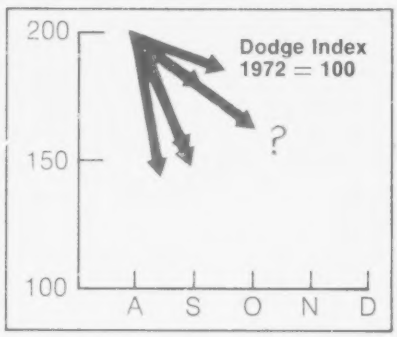
Interest rates soared (remember the 20 percent prime?), and the Dodge Index came tumbling down as construction led the rest of the economy into recession. From a strong 190 in January, this leading indicator of construction and building materials demand fell to 125 by May. This drop of one-third in only four months was much steeper than at any time during the 1974/75 recession. In fact, it was without precedent.

Period 2: June to September



Building wasn't the only victim of 1980's monetary overkill. When the whole economy responded with an unexpectedly sharp 9 percent decline in real GNP during the second quarter, the Fed backed off. With interest rates retreating during the summer, the Dodge Index—paced by a rebound in housing starts—staged a three-month recovery. By August, construction activity was pretty much back to where it was at the start of the year.

Period 3: September to ??



By September it was clear that the economy was recovering from its monetary shock treatment. But it was also clear that inflation was still rampant, and the money supply was expanding by leaps and bounds. This was enough to convince our central bankers that it was time to tighten up again.

On September 25th, the raising of the discount rate from 10 to 11 percent sanctioned increases in other key interest rates. By early October, the prime (which never did get below the double-digit level) was back up to 14 percent. Mortgage money, which at 12½ percent in the summer had supported a recovery of homebuilding, was now approaching 14 percent and threatening a replay of last spring's collapse of the housing market.

As 1980's final quarter began, period three had arrived, and it was looking uncomfortably like period one. Where it will lead is the subject of the rest of this *Outlook*.

The Economic and Political Environment

Inside every recession, there's a recovery trying to get out. The recovery from the 1980 recession surprised everyone with its early appearance, but in this case, early does not mean the same as strong, or even sustainable.

Most often, the path to recovery is paved with easy credit and extra federal spending. However, because of inflation's tenacity, the route to recovery from the 1980 recession is an obstacle course of monetary and fiscal restraint. The most recent boost of interest rates already threatens to set back housing, where a good part of the economy's recovery to date is concentrated. Fiscal restraint is beginning to bite in some areas, now that the 1981 budget is in effect. It is even possible that much of the third quarter's surprising recovery will turn out to be little more than a temporary reaction to the lifting of the credit controls that so greatly intensified the second quarter's decline. Meanwhile, inflation continues to hang on at a core rate of 9 percent or worse.

Under these circumstances, prospects for the economy's continued recovery are limited to a few unattractive alternatives: stagflation (not unlike the aftermath of the 1975 recession); the double-dip (recession/recovery/recession—the result of too much monetary restraint too soon); or the hockey stick (a low-angle recovery following last spring's sharp decline).

More than anything else, monetary policy will govern the progress of the economy's recovery through the next few critical months. Caught between an inflation rate that won't retreat and an equally irrepressible demand for money, the position of the governors of the Federal Reserve is not exactly enviable. Nevertheless, the Fed must bear the responsibility for risking double-dip recession by its latest move to restraint.

Because it is not possible to issue a forecast of construction for 1981 without making some assumptions about all-important interest rates, the key assumption is that rates will recede from their recent surge before the end of 1980. The sluggishness of the economy's recovery is not likely to support the present rate structure for long. Nor is Mr. Volcker likely to risk double-dipping by still further restraint. Despite the growth of the money supply, the Fed's position is less supportive today with inflation at 10 percent than it was last winter at 17 percent. "M" just isn't as popular an issue as "P"

It is expected that interest rates will retreat soon enough to avoid a second recession, but not soon enough to avoid a temporary setback of the credit-sensitive housing market.

Fiscal policy for most of 1981 is now in the hands of Congress. The realities of budgeting for the coming year dictate a hefty tax cut to offset the repressive effects of a large jump in Social Security taxes along with "bracket creep" on income taxes. Restraint on non-military spending (translation: urban programs and construction) is inevitable as an anti-inflation gesture. In contrast to the $6 billion Local Public Works program devised to stimulate the economy's recovery from the 1975 recession, budgetary restraint will be exerted in 1981 on public works, along with aid to distressed communities and state revenue-sharing.

Results of the 1980 elections will be known exactly 13 days after the release of this *Outlook*. At this writing, the polls indicate a close enough race that is necessary to pick the incumbent (if, indeed, a choice must be made). But if Mr. Carter should be unseated, *do not throw this forecast out!* As far as 1981 construction activity is concerned, the outcome just won't matter all that much. Major differences between the two principal candidates seem to fall into the areas of foreign policy and social philosophy, not economics. Both are economic conservatives. Both consider inflation the nation's top economic problem. Both promise a tight rein on

federal spending, along with a sizeable tax cut. Both have a front seat on the bandwagon of re-industrialization—everybody's easy answer to all the nation's economic ills.

Of course, a change of administration would make a considerable difference by 1984. In the short run, however, the economy will be shaped more by policies of the present than of the future.

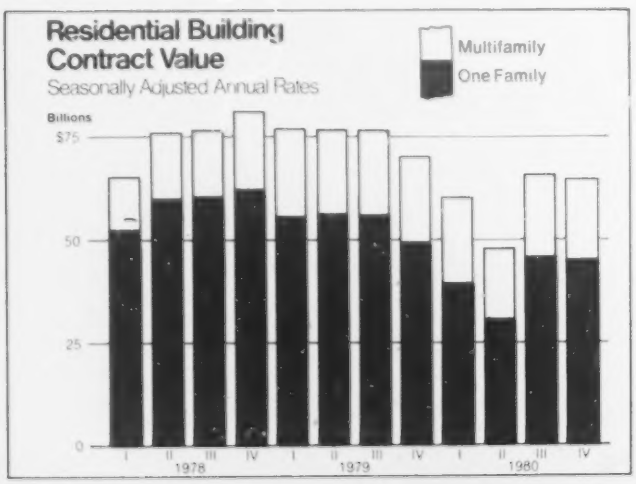
Implications for Construction

If demand were the only consideration, it would be reasonable to anticipate a vigorous recovery of construction next year, paced by a housing boom of heroic proportions. The all-too-familiar demography of the situation has already demonstrated (1977 and 1978) that annual housing need exceeds 2 million units on a continuing basis. If the pent-up demand resulting from 1980's huge shortfall is also taken into account, the pressure of demand on the shelter market is enormous right now. Nonresidential building, too, is poised for a strong recovery. Unlike the previous cycle, when the boom of the early 1970s left commercial building markets seriously overbuilt, the nonresidential building expansion of the late 1970s was more orderly, ending well short of overbuilding.

With these basics of demand in good order, recovery of construction will proceed in 1981 as fast—but only as fast—as external economic, financial, and political limitations permit. Unfortunately, the austerity that will permeate the 1981 economy will not make an encouraging environment for construction.

Residential Building

The recovery of home building, which required nothing more than a retreat of the spring run-up of mortgage rates, was clearly established by mid-1980. However, by late September the durability of this recovery was in question. Strong credit demands from the federal government, business, and state/local governments collided with tightening monetary policy. Already-rising mortgage rates crept still higher, discouraging many homebuyers.



Five years ago, in the fall of 1975, similar forces (particularly federal borrowing and tightening monetary policy) buffeted that housing recovery. The housing market survived those shocks and, starting from just about the same low base as 1980's, produced housing starts of a bit more than 1.5 million in 1976 and 2.0 million in 1977. Encouraging as this may be, there have been more than enough changes in the housing market between then and now to question the relevance of the experience of the middle 1970s as a guide to the early 1980s.

First, the changes for the better. Hard as it is to believe, some things have improved over the past five years.

• **Demand.** The demography of the housing market has become more favorable in at least two ways. In terms of sheer numbers, the current rate of net new-household formation has reached a record annual rate of 1.65 million. By conservative estimates, some

75,000 more households are now forming each year than in the mid-1970s. The official Census Bureau estimate is even higher.

There's also been a qualitative change. The number of households whose heads are in the age bracket 35-44 is now growing faster than ever before. This means a shift in the mix of housing demand from multifamily toward single-family ownership.

• **Supply.** Inventories of both multifamily and single-family units are low. In contrast to the overbuilt apartment/condominium market that followed the mid-1970s shakeout, today's multifamily vacancy rate is only 5 percent—about as low as it ever gets. The stock of one-family homes for sale was all but depleted during the first half of 1980 and is currently smaller than at any time since early 1976.

• **Housing Finance.** Several recent innovations have made the residential market more effective in attracting and holding mortgage funds. Sales of mortgage-backed securities, which were just gaining acceptance by institutional investors in 1974/75, have become a huge market ($100 billion in GNMA securities alone), successfully drawing sizeable sums from life insurance companies and pension funds into home mortgages. The surge in mortgage-backed securities sustained mortgage credit during the summer of 1980, sparking the upturn in housing starts even under conditions of weak savings flows through traditional passbook channels.

Money-market certificates, whose rates are competitively established by Treasury Bills, zoomed from nothing before mid-1978 to one-third of the thrift industry's current $625 billion in deposits. During the worst of the late 1979/early 1980 monetary squeeze, thrift institutions aggressively issued these certificates in order to hold their deposits. Disintermediation—the outflow of funds which plagued the thrifts during the summer of 1974 and crimped their mortgage lending for months afterward—was avoided.

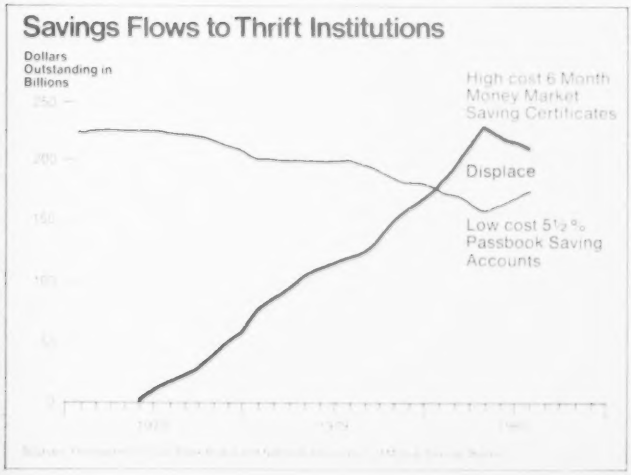
Together, the combination of pent-up demand, a tight housing supply, and considerably improved mortgage market operations suggests an even more vigorous housing recovery in 1981 than in 1976.

Unfortunately, inflation could impose formidable limits on this expansion, since it will negatively impact housing twice—in the form of higher *building* costs and higher *credit* costs. This is paramount among the changes for the worst from five years ago.

• **Credit Costs.** Circumstances have shifted the nature of the financing problem from availability to the cost of credit. Institutional purchasers of mortgage-backed securities require long-term yields that cover the core rate of inflation (9 to 10 percent) and provide a real return of 3 to 4 percent. Thrift institutions will have to charge similar rates. Treasury Bill rates and, in turn, the cost of money-market certificates will remain high, putting a floor under mortgage rates. Unpleasant as the prospect may be, mortgage rates are likely to hover in the low double-digit area throughout 1981.

• **Affordability.** Housing has been one of the leading sources of inflation for the past few years. Cost per square foot for single-family homes (excluding land and financing) has risen at an annual rate of 10½ percent since 1975 (compared with 8 percent annually during the prior five years). Multi-

Savings Flows to Thrift Institutions


Dollars Outstanding in Billions
High cost 6 Month Money Market Saving Certificates
Displace
Low cost 5½% Passbook Saving Accounts

family building, with an annual inflation rate averaging 9½ percent during the past five years, is hardly much different.

With the typical new one-family house now selling for $65,000 (versus $43,000 in 1975), home ownership is becoming more and more a "trickle down" affair. Most new homes are bought by previous owners who trade up on the basis of accumulated equity gains. First-time buyers often find themselves limited to the lower end of the existing home market as the only affordable option. Once they become owners, however, they soon become prospects for new homes. This other side to inflation in housing, the virtual assurance of capital appreciation, continues to be more of an incentive to buy than rising cost is a deterrent.

On balance, the pressures of demand are expected to outweigh the pressures of inflation in 1981's housing market, leading to a stronger recovery than in 1976. A total of 1.65 million housing starts is within reach. But in order to achieve it, the recent flare-up in mortgage rates must subside before the spring building season begins.

An economy wavering between recovery and recession is unlikely to sustain the current strong level of credit demand. Once the Federal Reserve brings the monetary aggregates within its targets, the listless recovery that 1981 promises should leave sufficient (though still expensive) funds available for quarter-by-quarter improvement in homebuilding. To sustain expansion, however, homebuyers will have to accept mortgages at 12½ to 13 percent—one of the evils of an inflation-prone economy.

Reaching a total of 1.6 to 1.7 million housing starts in 1981 amounts to not much of a challenge, considering the ongoing need for at least 2 million units per year. The test will come in 1982 and 1983, when the housing industry should again be operating at full capacity.

The Housing Mix

The interplay of demographics, credit availability, and credit cost will yield a mix of homebuilding in 1981 that is heavily tilted toward one-family units, *but not as much as it could be*. The stark fact that persons born in 1950 are now 30 means that a growing number of young families—occupants of the millions of apartments built in the late 1960s and early 1970s—are in the market for one-family homes. However, at 1981 prices and interest rates, not every family that seriously intends to purchase a new home will be able to realize that goal. Alternatives to new houses—apartments, condos, existing one-family homes, manufactured (mobile) homes, conversions, rehabbed units—will serve the needs of many families, especially the newest entrants into the marketplace. Condominiums, with their advantages of value appreciation and tax deduction, are obviously the most viable alternative to conventional one-family ownership for this segment of the housing market, as well as for the empty-nesters at the other end of the age spectrum. Some trade-off between one-family homes and condos is to be expected as long as a sizeable price differential exists.

In 1981, the biggest gain in housing starts will be in one-family units, the part of the residential market that bore the heaviest impact of 1980's credit restraint. Subject to revision (as future monetary policy is revealed), next year's total of 1,650,000 housing starts is most likely to consist of 1,100,000 singles, 180,000 condominiums, and 370,000 apartment units.

The Outlook

Residential Building Contract Value

Seasonally adjusted annual rates, $ in billions

Year	Quarter	Total	One-Family	Multi-Family*
1980	I	$60.2	$39.5	$20.7
	II	48.1	30.8	17.3
	III	66.3	46.0	20.3
	IV	65.0	45.5	19.5
1981	I	70.8	49.6	21.2
	II	84.5	60.7	23.8
	III	90.8	65.3	25.5
	IV	97.9	71.6	26.3

10/80 *Includes Nonhousekeeping Residential

1981 National Estimates

Dodge Construction Potentials

Nonresidential Buildings		1979 Actual	1980 Preliminary*	1981 Forecast	Percent Change 1981/80
Contract Value (millions of dollars)	Office Buildings	$11,194	$11,800	$11,700	– 1
	Stores & Other Commercial	13,021	11,150	11,700	+ 5
	Manufacturing Buildings	7,280	7,050	6,800	– 4
	Total Commercial & Manufacturing	$31,495	$30,000	$30,200	+ 1
	Educational	$ 6,298	$ 6,900	$ 7,550	+ 9
	Hospital & Health	4,790	5,050	5,250	+ 4
	Other Nonresidential Buildings	7,076	7,000	7,600	+ 9
	Total Institutional & Other	$18,164	$18,950	$20,400	+ 8
	Total Nonresidential Buildings	$49,659	$48,950	$50,600	+ 3
Floor Area (millions of square feet)	Office Buildings	234	220	200	– 9
	Stores & Other Commercial	579	445	425	– 4
	Manufacturing Buildings	237	195	175	–10
	Total Commercial & Manufacturing	1,050	860	800	– 7
	Educational	101	98	97	– 1
	Hospital & Health	58	55	53	– 4
	Other Nonresidential Buildings	160	143	145	+ 1
	Total Institutional & Other	319	296	295	—
	Total Nonresidential Buildings	1,369	1,156	1,095	– 5

*Eight months actual; four months estimated.

Residential Buildings

		1979 Actual	1980 Preliminary*	1981 Forecast	Percent Change 1981/80
Contract Value (millions of dollars)	One-Family Houses	$54,520	$40,425	$61,800	+53
	Multifamily Housing	17,430	16,500	21,200	+28
	Nonhousekeeping Residential	2,736	2,975	3,000	+ 1
	Total Residential Buildings	$74,686	$59,900	$86,000	+44
Floor Area (millions of square feet)	One-Family Houses	1,859	1,260	1,760	+40
	Multifamily Housing	616	500	585	+17
	Nonhousekeeping Residential	56	55	50	− 9
	Total Residential Buildings	2,531	1,815	2,395	+32
Dwelling Units (thousands of units)**	One-Family Houses	1,169	800	1,100	+38
	Multifamily Housing	599	475	550	+16
	Total Housekeeping Residential	1,768	1,275	1,650	+29

Nonbuilding Construction

Contract Value (millions of dollars)	Highways & Bridges	$13,842	$11,500	$12,500	+ 9
	Utilities	13,117	5,000	10,500	++
	Sewer & Water	7,704	7,550	8,300	+10
	Other Nonbuilding Construction	7,370	7,500	8,100	+ 8
	Total Nonbuilding Construction	$42,033	$31,550	$39,400	+25

All Construction

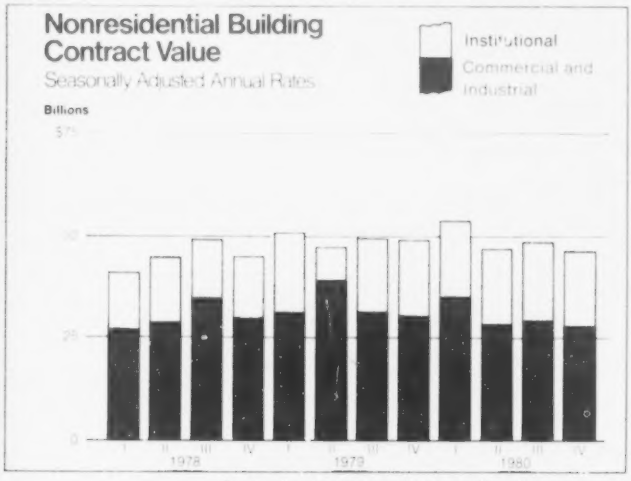
Contract Value (millions of dollars)	**Total Construction**	$166,378	$140,400	$176,000	+25
	Dodge Index (1972 = 100)	183	154	194	

*Eight months actual; four months estimated.
**F. W. Dodge basis.

Nonresidential Building

The fact that homebuilding is already several months into recovery is a hopeful sign for the lagging nonresidential building market, because these two building cycles rarely go their separate ways for long.

The trough of the nonresidential building cycle usually remains flat for two or three quarters before the next expansion begins.



A period of stability typically occurs at both peaks and troughs of the nonresidential cycle as, one-by-one, the various submarkets that make up total nonresidential building reverse themselves. If, as expected, this reversal sequence begins early in 1981, it should result in a rising rate of total nonresidential contracting during the second half of the year.

The "basics" needed to support the next expansion of commercial and industrial building (once it begins) are more favorable today than they were immediately following the 1975 recession. Store and shopping center construction, which is mostly a derivative of homebuilding, will benefit from an extended period of unusually strong housing demand. What's more, the same demographic forces that are fostering great expectations in the housing industry are also supporting record growth of the white-collar labor force, otherwise known as the people who occupy office buildings. And some of the new approaches to coping with the energy and productivity crises of the 1970s—the synfuel development program and the national commitment to reindustrialization—could mean as much for industrial building in the 1980s as the Local Public Works Act meant for highways and sewers in the late 1970s.

One limitation of these basic supports of the nonresidential building market is that they are more long-term than immediate in their impact. Before their potential can be tapped, the first order of business is to take up the slack left by the recession of 1980.

Commercial and Industrial Building

• **Retail Building.** The past two years' experience has piled up still more evidence of the strong bond between housing and retail building. Once again, the two-quarter lead-lag relationship prevailed, as housing's peak in 1978-III (at 2.1 million units) was followed by a peak in store/shopping center contracting in 1979-I (at a rate of 300 million square feet). Each market, in its turn, eased off its peak (gradually at first), then fell sharply.

Peak-to-trough declines—50 percent for housing and 40 percent for stores—suggest that the retail building cycle is close to bottoming out. Once housing's recovery is securely re-established, it is reasonable to expect that strengthened residential activity will spawn a recovery of retail building. Past performance would put the upturn of store/shopping center contracting in 1981's second quarter, if not before.

The subsequent expansion of retail building through the balance of 1981 will be subject to the same financial limitations endured by housing. If credit conditions can support the start of 1.65 million housing units in 1981, then they will also support up to 190 million square feet of retail building.

Warehouse construction bears a changing relationship to stores, depending on the phase of the building cycle. Next year's recovery of retail building is expected to generate a demand for 180 million square feet of warehouse space. Contract-

ing for commercial garages and service stations in 1981 is estimated at 55 million square feet.

• **Office Buildings.** Easily the best survivor of the recession, office building hardly even slowed its blistering pace in 1980. Contracting for offices is heading for a total of 220 million square feet this year, down only 6 percent from 1979's record volume. This total is double the volume of office space provided in the previous recession year, an indication of the major structural change that has taken place in this market in only half a decade.

Because the current decline in employment has been concentrated heavily among blue-collar workers, the 1980 recession has brought little easing of the pressure on office space caused by the spectacular growth of the white-collar labor force since the mid-1970s. A sizeable backlog of demand will sustain the office building boom for at least another year.

• **Manufacturing Buildings.** The expansion of industrial building normally begins when manufacturers' operating rates approach 85 percent. Because this critical rate is currently hovering around 75 percent, recovery of industrial building is several quarters away.

The interpretation of operating rates has to be modified a bit in order to accommodate the perversity of today's energy-dominated economy. Using barely half its available capacity, the automobile industry would hardly be considered a candidate for major investment in 1981. Yet, auto manufacturers are committing billions toward the belated development of a new breed of more efficient cars. At the other end of the spectrum, the oil companies—their operating rates are currently higher than all but a few manufacturing industries—have more refining capacity than they need, considering the prospect for reduced consumption of petroleum products in the future.

The 1981 recovery pattern of industrial building must reflect the following assumptions: while tax incentives for "reindustrialization" will accelerate the recovery of capital spending, the emphasis on productivity will initially stimulate investment in *equipment* rather than *buildings;* the restructuring of the auto industry will also tilt heavily toward investment in *technology* as opposed to *construction;* and although the synfuel program will launch at least one huge facility in 1981, it, like most chemical processing plants, will not involve a significant amount of square footage of enclosed structure.

Beyond these special situations, the generally sluggish 1981 economy will *not* provide the environment for either an early—or strong—recovery of industrial building.

Institutional Building

Obstacles to public financing during 1980 exaggerated the sagging trend already apparent in institutional building. Together, soaring interest rates and budgetary restraint further sunk every category in this group, but none so much as public administration buildings. The current year's total of all contracting for institutional building fell to an estimated 296 million square feet—the lowest volume in more than 25 years.

Subject to similar conditions in 1981, the institutional building market will be further handicapped by the suspended return to the states of $2.3 billion in federal revenue that would normally be due them under the federal revenue-sharing program. The prospect: little gain in institutional building next year. The greater likelihood: another decline.

The Outlook

Nonresidential Building Contract Value

Seasonally adjusted annual rates, $ in billions

Year / Quarter		Total	Commercial/ Industrial	Institutional and Other
1980	I	53.9	$35.0	$18.9
	II	47.0	28.5	18.5
	III	48.6	29.4	19.2
	IV	46.3	27.2	19.1
1981	I	46.7	27.1	19.6
	II	49.5	29.3	20.2
	III	51.8	31.2	20.6
	IV	54.4	33.2	21.2

1981 Regional Estimates

Dodge Construction Potentials

Northeast

Connecticut, District of Columbia, Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Eastern Pennsylvania, Rhode Island, Virginia, Vermont

Contract Value (millions of dollars)

	1979 Actual	1980 Preliminary*	1981 Forecast	Percent Change 1981/80
Nonresidential Buildings				
Commercial & Manufacturing	$ 5,257	$ 5,300	$ 5,525	+ 4
Institutional & Other	3,608	3,850	4,200	+ 9
Total	$ 8,865	$ 9,150	$ 9,725	+ 6
Residential Buildings				
One-Family Houses	$ 7,155	$ 5,375	$ 8,325	+55
Multifamily Housing	2,677	2,775	3,600	+30
Nonhousekeeping Residential	789	600	625	+ 4
Total	$10,621	$ 8,750	$12,550	+43
Nonbuilding Construction				
Highways & Bridges	$ 2,122	$ 2,200	$ 2,350	+ 7
Utilities	415	275	1,250	++
Other Nonbuilding Construction	3,123	3,875	3,975	+ 3
Total	$ 5,660	$ 6,350	$ 7,575	+19
Total Construction	$25,146	$24,250	$29,850	+23

Midwest

Northern Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, North Dakota, Ohio, Western Pennsylvania, South Dakota, Wisconsin, West Virginia

Contract Value (millions of dollars)

Nonresidential Buildings				
Commercial & Manufacturing	$ 7,533	$ 6,325	$ 6,150	− 3
Institutional & Other	4,466	4,600	4,950	+ 8
Total	$11,999	$10,925	$11,100	+ 2
Residential Buildings				
One-Family Houses	$11,103	$ 6,925	$10,975	+58
Multifamily Housing	3,398	2,725	3,650	+34
Nonhousekeeping Residential	539	450	425	− 6
Total	$15,040	$10,100	$15,050	+49
Nonbuilding Construction				
Highways & Bridges	$ 3,947	$ 3,100	$ 3,300	+ 6
Utilities	1,443	375	2,725	++
Other Nonbuilding Construction	3,713	3,400	3,700	+ 9
Total	$ 9,103	$ 6,875	$ 9,725	+41
Total Construction	$36,142	$27,900	$35,875	+29

*Eight months actual; four months estimated.

South

Alabama, Arkansas, Florida, Georgia, Southern Illinois, Kansas, Louisiana, Mississippi, Missouri, North Carolina, Nebraska, Oklahoma, South Carolina, Tennessee, Texas

Contract Value (millions of dollars)

	1979 Actual	1980 Preliminary*	1981 Forecast	Percent Change 1981/80
Nonresidential Buildings				
Commercial & Manufacturing	$10,442	$10,075	$10,125	—
Institutional & Other	6,363	6,425	6,775	+ 5
Total	$16,805	$16,500	$16,900	+ 2
Residential Buildings				
One-Family Houses	$20,847	$16,875	$24,900	+48
Multifamily Housing	6,234	6,350	7,700	+21
Nonhousekeeping Residential	749	1,125	1,150	+ 2
Total	$27,830	$24,350	$33,750	+39
Nonbuilding Construction				
Highways & Bridges	$ 5,241	$ 4,250	$ 4,600	+ 8
Utilities	11,015	2,350	4,000	+70
Other Nonbuilding Construction	5,233	4,800	5,075	+ 6
Total	$21,489	$11,400	$13,675	+20
Total Construction	$66,124	$52,250	$64,325	+23

West

Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming

Contract Value (millions of dollars)

	1979 Actual	1980 Preliminary*	1981 Forecast	Percent Change 1981/80
Nonresidential Buildings				
Commercial & Manufacturing	$ 8,263	$ 8,300	$ 8,400	+ 1
Institutional & Other	3,727	4,075	4,475	+10
Total	$11,990	$12,375	$12,875	+ 4
Residential Buildings				
One-Family Houses	$15,415	$11,250	$17,600	+56
Multifamily Housing	5,121	4,650	6,250	+34
Nonhousekeeping Residential	659	800	800	—
Total	$21,195	$16,700	$24,650	+48
Nonbuilding Construction				
Highways & Bridges	$ 2,532	$ 1,950	$ 2,250	+15
Utilities	244	2,000	2,525	+26
Other Nonbuilding Construction	3,005	2,975	3,650	+23
Total	$ 5,781	$ 6,925	$ 8,425	+22
Total Construction	$38,966	$36,000	$45,950	+28

*Eight months actual: four months estimated.

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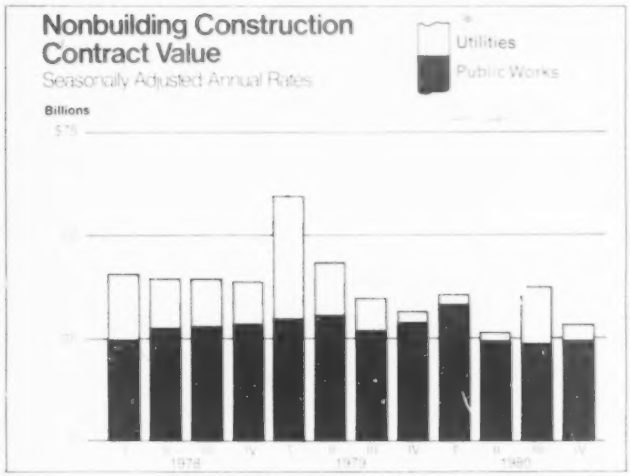
Nonbuilding Construction

While housing has garnered most of the (unwanted) publicity in 1980, nonbuilding construction has quietly fallen upon equally hard times. Through the end of 1980's third quarter, contracting for public works and utilities lagged behind 1979's figure by 30 percent.



Each of the two broad categories of nonbuilding construction is experiencing its own special problems. The $20-billion-a-year utility construction market, still in its post-TMI quandary, will tap only about one-quarter of its potential in 1980. Meanwhile, public-works construction has been stalled since early summer because federal authorizations for various programs are being held up in the name of fiscal restraint.

• **Public Works.** In order to evaluate prospects for contracting in 1981, it's necessary first to sort out 1980's erratic funding for highways and waste-water-treatment (WWT) plants—the two big-ticket items.

The past year's opening quarter was unusually strong, due mostly to the delayed release, by the Environmental Protection Agency (EPA), of a large block of WWT funds that had been authorized in 1979. The second quarter's much lower rate of contracting reflected both a more normally paced injection of EPA funds *and* the initial holdout of federal highway money. By the third quarter, with *both* highway and WWT funds being restrained, public works contracting fell to its lowest rate in three years.

The limited availability of public-works money in 1981 is partially indicated by the $3-billion slash in the 1981 budgets of the federal agencies which administer some $40 billion of program funds. Of course, there is always the possibility that the spending authorized for 1980—but now being held back—will be released next year. Such action would hardly be consistent with the general approach to tight budgeting for 1981—but who says governments have to be consistent?

Perhaps the best guide to public-works contracting in 1981 is a simple caveat: Be aware of how strategies for the early 1980s differ from those of the mid-1970s. The last time the economy was struggling its way out of recession, public works were used as the channel for $6 billion of direct economic stimulus; this time around, public works are a primary target of budgetary restraint.

• **Utilities.** Resolution of the nuclear issue—if and when it is ever resolved—will remove only one of several impediments to the renewed expansion of electric-power facilities construction. Present excess capacity and the re-evaluation of future energy requirements have sapped the once-felt urgency to start construction of new capacity—nuclear or fossil fueled—for the next few years. Meanwhile, short-run attention is focused on converting oil-burning facilities to coal.

Next year's utility construction starts will almost certainly top the extremely low 1980 value, but at the same time will fall far short of the pre-TMI level.

The Outlook

Nonbuilding Construction Contract Value

Seasonally adjusted annual rates, $ in billions

Year/Quarter		Total	Public Works	Utilities
1980	I	$35.0	$33.0	$ 2.0
	II	26.3	24.8	1.5
	III	37.0	24.0	13.0
	IV	27.9	24.4	3.5
1981	I	36.4	28.4	8.0
	II	39.9	27.9	12.0
	III	41.0	29.0	12.0
	IV	40.5	30.5	10.0

10/80

A Fragile Recovery

The construction industry is emerging from its 1980 recession under much different circumstances than it faced during the recovery that followed the 1975 recession. This time around, recovery begins with inflation at 10 percent, not 6 percent. Mortgage rates are averaging 13 percent, not 9 percent. The thrust of government economic policy is restrictive, not stimulative. This partial list of differences is enough to illustrate the fragile nature of the current recovery.

Rising interest rates pose the single greatest threat to sustained recovery in the months immediately ahead. Housing, of course, is the building market that is most sensitive—and obviously, the most vulnerable—to changes in credit conditions. But its problems are not isolated—nor can they be quarantined. A healthy, strong housing market is, in fact, essential to the recovery of many kinds of commercial and institutional building. Office and industrial construction, which need the support of general economic expansion, cannot thrive in a credit-induced "double dip."

With the housing market already on the brink of reversal, a further rise in interest rates (from their already high level) could set back the recovery of the *entire* construction industry—not just housing. Skeptics need only review the sequence that followed last winter's overdose of credit policy. If the process of cyclical expansion of construction markets that began in the summer of 1980 is to survive and grow through 1981, it is essential that the governors of the Federal Reserve show more self-restraint in the application of monetary restraint.

Unfortunately, housing and credit are already on another collision course. It is probably too late to avoid a temporary stalling of the housing market during the final quarter of 1980. However, if interest rates are permitted to recede by year-end, the 1981 housing total can still reach into the 1.6- to 1.7-million-unit range for the year as a whole.

Highlights of the outlook for *total* construction contracting in 1981:

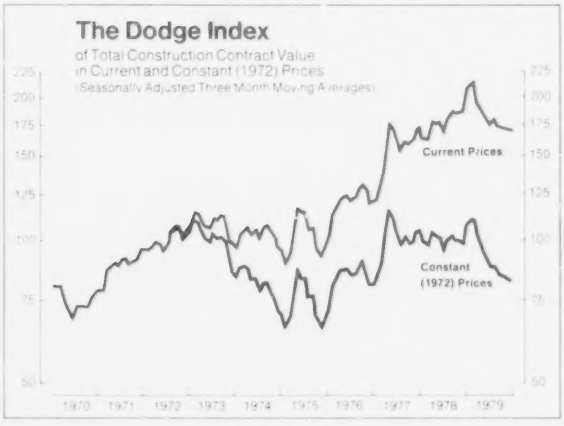
- Following a pause in 1980's fourth quarter, the recovery will regain its momentum early in 1981.
- Next year's gain will be concentrated heavily in housing; nonresidential building's recovery will be delayed until the second half and won't show strength until 1982.
- Total construction contract value will increase by 25 percent in 1981, to $176 billion.
- Although this will be one of the largest annual gains in the past 30 years, it is not all it seems to be, because:
- It represents only partial recovery from 1980's steep decline, and—
- at least 10 of the 25 percentage points of gain will be just more inflation.

Despite these qualifications, the recovery from 1980's construction recession is on its wobbly way. In the remaining pages, which are based on portions of *The Next Five Years,** some thoughts are offered about where this incipient expansion will lead.

*An economic analysis of national and regional construction markets, 1981-1985, by the McGraw-Hill Information Systems Company Economics Department (June 1980)

The Next Five Years

While the previous section of this report has addressed the prospect of cyclical recovery from the recession of 1980, emphasis now shifts to a subject that lies beyond the cycle: growth. What has been the *real* progress from one cycle to the next in the 1960s and 1970s? What will it be in the 1980s?



For at least the last 15 years, the construction market has borne the label "slow grow." When it wasn't slow grow, it was "no grow." The harsh facts: Between the cyclical peaks of 1965 and 1969, *real* growth in new construction averaged only 2 percent annually; from then to the next peak (1973), growth was still only a grudging 2 percent; and between the peaks of 1973 and 1978 (see chart), there was no growth at all.

This dismal pattern is due to change for the better in the 1980s. The extent of this change will depend on how the economic problems of the new decade—most especially inflation—are resolved, if at all.

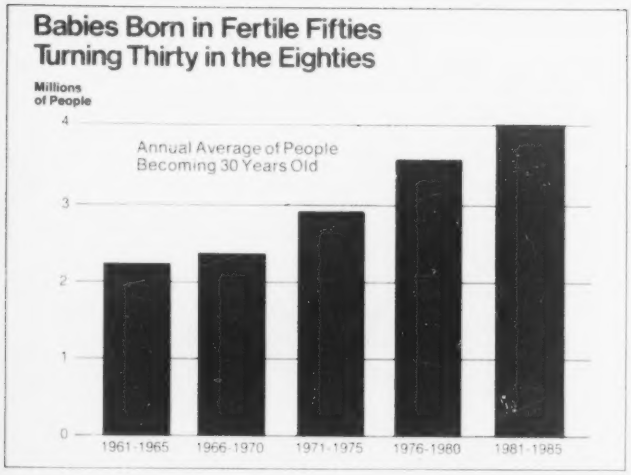
Five-Year Potential

The long-awaited 1980s are a demographic milestone. This is the decade in which all the people born during the fertile 1950s turn 30—their collective birthdays heralding profound implications for the construction industry and its suppliers. The 1960s offered a preview of what lies ahead, as this bulge in the population pyramid passed through the educational system; the impact on school construction, though temporary, was unforgettable. The main event, which is only now beginning, will affect construction markets in a much broader way as this same group's needs for housing, shopping facilities, offices, factories, recreational facilities, and a wide variety of other forms of social capital are expressed. Unlike the educational building boom of the 1960s, the construction boom of the 1980s promises to be general in scope.

The potential for new construction that will evolve naturally from the demographics of the next five years is easily the largest that the industry has ever experienced. Housing will form the leading edge of the building boom of the 1980s. Shelter requirements arising from record rates of household formation, along with replacement and relocation needs, will exceed 2.5 million units annually through most of the decade ahead. And because a significant part of the demand for nonresidential construction is eventually derived from the same forces that generate shelter needs, the potential for nonresidential construction in the 1980s is foreshadowed—with appropriate lags—by this prospective housing boom.

It's simple enough to develop estimates of the construction potentials of the 1980s by focusing exclusively on the demand variables. But as eye-popping as these numbers are, they are suspect under Murphy's Law, as well as the law that governs supply and demand. Things *do* go wrong (take 1980 as the latest example). There *is* a *supply* side to economics, as it has recently become fashionable to discover.

Potential is *never* fully realized. During the final half of the 1970s, a period when the housing industry reached full-capacity operation in only two of five years, approximately two-thirds of the potential need for shelter was met through the production of new homes and apartments. Some of that period's shelter requirement was satisfied by alternatives to new housing—mobile homes and conversions or rehabilitation of existing structures. And some needs simply went unmet, deferred and thus becoming part of the shelter-satisfaction po-



tential for the early 1980s. In nonresidential building markets, where alternatives to new construction are not as readily available as they are for housing, a higher proportion of potential is normally realized. Even so, between 1976 and 1980, a period that was blighted by severe inflation and recession, only about 70 percent of nonresidential building potential was actually realized.

The volume of new construction that will be initiated during the next five years will depend partly on the size of the potential and partly on the extent to which circumstances permit that potential to be realized. Demographic data have long indicated that the potential for new construction—not just housing, but all kinds of construction—will reach a new high in the five years ahead. However, this period is also unusual, in that it puts a formidable array of obstacles in the path of the potential it offers.

Old Problems in a New Setting

• **The Cycle.** Realizing all the potential of a five-year period like the one coming up would demand that the building industry operate at, or near, full capacity *all the time*. If this challenge were adopted, the first hurdles to clear would be the lingering recession of 1980 and the less-than-robust recovery that will follow in 1981.

During the first year of the next five, housing output will be, at best, some 400,000 units short of what is needed. Nonresidential building, which normally lags behind housing, will remain depressed through most of 1981, making its recovery late in the year. Pitting performance against potential, the next five years will be getting off to a poor start.

• **Capacity Limits.** A weak start wouldn't matter so much if 1981's shortfall could be made up in some future year. There are, however, limits to the cyclical flexibility of the building business.

Homebuilding, for example, has recently (1977/78) demonstrated a capacity limit in the range of 2.0 to 2.1 million units per year. In the 1980s, the market could absorb this volume—and more, every year. If the full potential of the period is to be achieved, it means that for every lean year like 1981, when only 1.6 to 1.7 million units are built, there must be a year when homebuilders produce 2.5 million units. Not only is that volume unattainable, but it would be a waste of resources for this highly cyclical industry to provide enough capacity to meet such extreme peaks. Mobile homes, conversions, and rehabilitation of existing units are more desirable alternatives, and they will flourish in the 1980s along with conventional home building.

• **Energy.** Cartel-priced oil has had a devastating effect on the cost of many building products in recent years, as discussed in depth in the feature section of last year's *Outlook*. Because many building products use petroleum derivatives as raw materials, or require large quantities of energy for their manufacture, building-material prices, which reflect these costs, have been the source of most of the inflation in construction ever since the 1974 "crisis."

The continuing adjustment to scarce and costly energy has both positive and negative implications for construction in the 1980s. The most obvious opportunities lie in federal subsidization of a host of energy conservation measures—including solar devices and systems. Daylighting, for example involves the use of more glass as well as more sophisticated HVAC controls.

Energy performance standards (BEPS) will influence the design

and construction of most buildings in the 1980s. Although such standards may result in higher-cost construction, the higher *initial* investment in creating energy-efficient structures is recoverable over the long run, as a "trade-off" against lower operating expenses.

The ever-rising cost of energy cannot be avoided, but it should be no more of a limiting factor to building in the early 1980s than it was in the late 1970s. Energy-conscious design can shift some of the inescapable cost from the consumption of oil to the consumption of building products.

• **Inflation.** Of all the constraints that will limit the realization of the potential for the construction industry in the 1980s, inflation is the most threatening by far, simply because it does its work in two ways. As building costs continue to soar, averaging 11 percent over the next five years, some marginal projects will be cancelled while others are scaled down. Rehabilitation of existing structures, especially housing, will be encouraged as an alternative to new construction.

However, it is not these direct effects of building costs themselves, but rather the indirect consequences of continued double-digit inflation throughout the economy at large that are the greatest threat to construction markets. Until inflation is finally racheted down generally—a process that will take half a dozen years—monetary and fiscal restraint will remain the way of economic life. It needs hardly to be added, except for emphasis, that high interest rates and tight federal budgets create a harsh environment for construction.

The Eighties . . .
. . . Unfulfilled Expectations

The next five years will begin with the construction industry in the early stages of recovery from one of its periodic slumps. As usual, it will be housing that leads total construction into the next wave of expansion. But 1981 will remain something of a transition year—one in which gains in residential building are partially offset by lagging nonresidential building. Before the end of 1981, however, nonresidential building will also be making its recovery, clearing the way for an even larger gain in total construction contracting in 1982. By 1983, the construction industry is expected to be operating at (or very near) full capacity once again.

The total amount of new construction that is likely to be contracted during the five-year period 1981-85 will reach an all-time high. Category-by-category analysis of 20 key residential and nonresidential construction markets indicates that the total physical volume of work started will exceed that of the past five years by 5 to 10 percent.

Considering the potential for growth in the early 1980s, when demographic forces will be exerting a highly positive influence on construction demand, a real gain of 5 to 10 percent must be regarded as less than optimum, even though it is an improvement over the no-grow 1970s. Ironically, the period that provides the best potential for construction also offers some of the worst conditions for realizing it. The constraints of cycle, capacity, energy—and most especially, monetary/fiscal restraint—will bear heavily in the years immediately ahead. As a consequence, conditions in the early 1980s will not permit the same degree of realization of its potential as in previous periods. Even within these limits, however, there is room for growth—simply because the potential is so great.

In *dollar* terms, the outlook for construction contracting over the next five years takes on a strikingly different, but perhaps deceiving, appearance. If construction cost continues to inflate at 11 percent annually, as is likely, it will add up to a five-year cost increase of between 65 and 70 percent. This translates into a 75 percent rise in the contract value of the moderately larger volume of work to be done. For whatever these dollars will be worth, they amount to a spectacular $1.3 trillion of construction over the next five years—more than the cumulative total of construction contracted in the entire decade of the 1970s.

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Prepared October 1980
by the Economics Department,

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